

REMARKS/ARGUMENTS

Reexamination and favorable reconsideration of the captioned application is respectfully requested.

A. THE PRIOR ART REJECTIONS

Claims 1, 3-4, 9, 14-15, 18-21 and 23 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Publication 2004/0209615 to Lamb et al in view of U.S. Publication 2002/0058504 to Stanforth. Claims 5 and 22 under 35 USC 102(a) as being unpatentable over U.S. Publication 2004/0209615 to Lamb et al in view of U.S. Publication 2002/0058504 to Stanforth, further in view of U.S. Publication 2004/0208151 to Haverinen et al. All prior art rejections are respectfully traversed for at least the following reasons.

B. PATENTABILITY OF THE CLAIMS

The office action has argued that a person skilled in the art would combine the teaching of U.S. Publication 2004/0209615 to Lamb with that of U.S. Publication 2002/0058504 to Stanforth in order to arrive at the features of independent claims 1, 14 and 20. Applicants strenuously disagree. Such a combination would not occur to one of ordinary skill in the art due to the very different architectures of the prior art networks. Moreover, even if such a combination could be made and were made, the combination would not realize the claimed subject matter.

Lamb describes the parallel operation of a WLAN data network with a conventional voice network. In the Lamb arrangement, the WLAN access network 450 is used exclusively for data, while voice services are routed via the conventional cellular network 440. As illustrated in Lamb Figs. 2 and 4 and described at Lamb paragraph 10023], the WLAN data network is essentially an access network 405 including access

points connected to an access point controller over an IP link, with the access network controller being further connected via an IP link to an internet service provider that has an AAA server function in the core network. The voice network is a conventional cellular, access network (base stations) with a PLMN core network. As taught at U.S. Lamb paragraph [0031], and shown in Lamb Figs. 4 and 5, the interworking point between the wireless data and voice networks is an HLRIAAA server, which is able to register both data network and voice network connections. It is the Lamb AAA server located in the core network that stores the network address of a mobile station when it connects to the wireless data network, as described at paragraph [0027].

In other words, the Lamb access point controller does not store address information related to the mobile station, nor does the access point controller page the mobile station. It is clear from Lamb paragraphs [0043] and [0044] that, when a voice call is waiting while the mobile station is in a data session via the WLAN access network, the Lamb HLR/AAA server sends a message to the mobile station to suspend its data activity using the address stored in the AAA server. The mobile station is then paged by a voice connection signal via the serving MSC over the PLMN access network in the conventional manner.

Because of the separation of voice and data routing in the network, Lamb's paging does not occur through the WLAN network at all. Moreover, even the suspend message sent to notify the mobile station to terminate data activity due to a waiting voice call is sent by the AAA server using the address stored in the AAA server, and not by the access network controller.

Given this specific architecture and function, U.S. Publication 2004/0209615 to Lamb utterly fails to disclose or suggest, e.g., an unlicensed radio access network

wherein the access controller *comprises a database for storing an identification of a mobile station in association with a network address for said mobile station on said broadband network, wherein said network address is unique to said mobile station so as to enable said access controller to page said mobile station individually, said access controller being adapted to delete said identification data when said mobile station ceases to operate in the coverage areas of said unlicensed radio access network* in accordance with claims 1 and 20 of the present application.

In addition, there is no mention whatsoever in U.S. Publication 2004/0209615 to Lamb of location areas and the association of the access point controller of the WLAN with a location area in the licensed radio mobile network or PLMN. In fact such a disclosure would make no sense at all in the context of Lamb, as location areas are used for tracking the position of mobile stations in a voice network and hence are required for paging a mobile station in a specific geographical area when a voice call is waiting. Since the unlicensed radio access network or WLAN of Lamb is used exclusively for data, there is no need to associate this access network with a location area.

Similarly, Lamb et al. fails to disclose or suggest a method in an *access controller* of an unlicensed-radio access network including the steps of:

registering said mobile station identification information in association with said mobile station network address on said fixed broadband network, wherein said network address is unique to said mobile station so as to enable said access controller to page said mobile station individually,

determining when a connection established with said mobile station is no longer maintained and

deleting said mobile station identification information when it is determined that a connection is no longer maintained

in accordance with claim 14 of the present application.

U.S. Publication 2002/0058504 to Stanforth describes a single radio access system for a conventional cellular communication system. The Stanforth access network is an ad-hoc radio access network, which in the embodiment of Stanforth Fig. 4 consists of ad-hoc radio terminals, a router 14, at gateway node 16 and a cellular gateway controller 18. The cellular gateway controller 18 is interfaced with an MSC of the PLMN core network.

This Stanforth structure already differs considerably from that of U.S. Publication 2004/0209615 to Lamb, as the interworking point between the unlicensed access network according to Stanforth is an MSC and not the HLR/AAA server used in Lamb. Further, in contrast to Lamb, Stanforth teaches the transmission of voice communications via the ad-hoc access network.

Yet further, some parts of Stanforth suggest that the interface with the conventional cellular network does not use conventional signalling, as current signalling cannot support the described functions. For example, when an incoming call for an ad-hoc terminal is handled according to Fig. 7 and using the architecture of Fig. 4 (see paragraph [0045]), the gateway controller is described as translating the telephone number in the paging request to an ad-hoc address for the terminal. The gateway/gateway controller is shown as supporting a conventional GSM A-interface towards the MSC. However, a conventional paging request from an MSC via the GSM A-interface does not contain a telephone number; it contains the IMSI and TMSI. As a further example, it is stated in paragraph [0042] that the gateway controller validates the authenticity of the terminal via the conventional GSM-A interface. Conventional

authentication procedures require interaction with the terminal, which is not achieved using Voice over IP signalling.

The structure and the function described in U.S. Publication 2002/0058504 to Stanforth is extraordinarily far removed from that of Lamb. Moreover, U.S. Publication 2002/0058504 to Stanforth does not provide a complete solution for the integration of an ad hoc network with a cellular communication system. For these and other reasons, the skilled person would not be motivated to modify the arrangement of U.S. Publication 2004/0209615 to Lamb by the teaching of U.S. Publication 2002/0058504 to Stanforth.

Moreover, even if the skilled person were to combine the teaching of Lamb and Stanforth in the manner opined by the office action, the resulting combination would *not* teach various features of the independent claims, such as (for example) the final limitations of independent claims 1, 14 and 20. That is, the concocted combination would still lack, e.g.:

said access controller being adapted to delete said identification data when said mobile station ceases to operate in the coverage areas of said unlicensed radio access network (of independent claims 1 and 20)

determining when a connection established with said mobile station is no longer maintained and deleting said mobile station identification information when it is determined that a connection is no longer maintained (of independent method claim 14).

The office action has specifically applied paragraph [0058] of U.S. Publication 2002/0058504 to Stanforth. However, paragraph [0058] of Stanforth gives no information about stored address information for a terminal held in a gateway or gateway controller being either deleted or retained. Instead, paragraph [0058] of Stanforth relates to the call initiation process from an ad-hoc terminal to an external cellular network. After

termination of the call, the gateway releases the call and sends a message back to the terminal via its associated gateway. It is then *the terminal* that erases call information. This can have no bearing on information stored in either a gateway or gateway controller. In fact, the only information disclosed in Stanforth concerning address data for a terminal stored in a gateway and gateway controller appears to be given in paragraph [0042], which describes the updating of temporary address information on a gateway when a terminal moves from one gateway to another. There is no disclosure of the fate of stored information in a gateway controller when a terminal no longer operates in the ad-hoc network.

In view of the above, Applicants submit that the claims are patentable over the applied prior art and request withdrawal of all prior art rejections.

C. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for the entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Nylander
Serial No. **10/591,953**

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Respectfully submitted,
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